

DOCUMENT RESUME

ED 179 974

CS 205 323

AUTHOR Purves, Alan C.
 TITLE Putting Readers in Their Places: Some Alternatives to Cloning Stanley Fish.
 PUB DATE Dec 79
 NOTE 18p.; Paper presented at the Annual Meeting of the Modern Language Association (94th, San Francisco, CA, December 27-30, 1979)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Critical Reading; *English Instruction; Language Arts; Literary Criticism; *Literature Appreciation; *Reading Instruction; *Reading Processes; Reading Skills; Teaching Methods
 IDENTIFIERS *Reader Response; *Schemata

ABSTRACT

The reader has replaced the text as the central figure in the teaching of literature. Three techniques that psychologists and educational researchers believe produce better reading comprehension are: the concept of schemata, or the kind of mental outline a reader has when perceiving something; the acquisition or development of an appropriate stance toward the text; and the conscious cognitive act by the reader of examining an experience of the text. There are three functions of a curriculum in literature: to provide literary schemata, to acknowledge that there are any number of possible statements about a text, and to provide students with a set of heuristics or strategies for being an efficient reader. (AEA)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Alan C. Purves

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Putting Readers in Their Places: Some Alternatives to Cloning Stanley Fish

Alan C. Purves

According to recent reports, the literary text is dead. A thing of the past. When I was a student in the 1940's and 1950's, the text seemed a hale and hearty ruler of the literary critical world. Supported by chamberlains like I. A. Richards, who asserted its "plain sense meaning," Cleanth Brooks, Robert Penn Warren, and René Wellek, who defined its structures, the text stood to be understood, approached, admired in all its glory with definitive editions, reader's guides, explications, and annotations. A few minor revolutionaries or dissidents were tolerated; Louise Rosenblatt was the herald of the regicides, but she was dismissed as an "educationist" and relegated to methods courses. Northrop Frye anatomized criticism and said that texts were mute, but many of his adherents paid no attention to his introduction and simply showed how his anatomy supported the old ruler.

While the text ruled, literature was almost as easy to teach as it had been in the earlier regime when history was queen and biography her consort. Facts were then to be regurgitated: dates, trends and influences, all assembled in a kind of "manifest destiny" for literature. Under the new monarchy, these were replaced by speakers, metaphors, ambiguities, images, and structures, which if not to be memorized could be learned for subsequent use in "cracking" the text. Criticism became an enterprise of elegance and logic, rather than of enthusiasm and emotionality; the critic became faceless rather than a personality.

One may speculate as to why the reader has come to replace the text as the central figure in the literary enterprise. Perhaps the reason lies in the growth of psychological criticism which found itself confronted by the Heisenberg

ED179974

C5205323

principle and could do little else than observe the reader. Perhaps the reason lies in the fact that critic teachers were losing their students, those who did not want to deny their own personality. Perhaps the reason lies in the growth of interest in communication theory, perhaps in resurgent romanticism, perhaps in the distrust of the dogmatism of the critics. Other causes might occur to others, but the fact is true: The reader reigns. But who is the reader? When a critic like Stanley Fish writes, "...it is the structure of the reader's experience rather than the structures available on the page that should be the object of descriptions,"¹ who is this reader that we should look at?

One can find a number of partial identifications. Some people claim to be the reader: Norman Holland suggests it is he or his students, many of whom resemble him in their awareness of their "identity themes."² The structuralists and the semiologists would have the reader be that person who is well aware that the literary text has no direct referent but is an interplay of language that can be toyed with but not fully interpreted. It can be deconstructed, but such deconstruction, the reader realizes, still misses the essence of the text. The reader realizes that his or her status is always that of the outsider.³ Louise Rosenblatt disagrees and goes further, I think, for she claims that the reader enters into an aesthetic transaction with the text to create a poem.⁴ Stanley Fish would appear to agree when he says that "intention, form, and shape of the reader's experience are simply different ways of referring to (different perspectives on) the same interpretive act...."⁵ Rosenblatt and Derrida would agree that the text is not message-bearing, but something to be experienced and contemplated; she would agree with Eco that to take the text as having a referent, to read it efferently (her term) is a mistake if one seeks to read aesthetically. All would seem to agree that the reader brings a

great deal to the text and is no passive recipient nor one who can "crack" a text as one cracks a code.

The reader, then, is aware of the nature of language and its ambiguous relation to reality; is aware of his or her own identity as a reader; and is capable of entering into an aesthetic transaction with a text. One might add that to some of the adherents the reader is immensely well-read, knows many languages, is well versed in etymology, is capable of taking multiple perspectives, and is capable of writing turgid prose about being a reader, often belaboring rather simple points about language into meaninglessness. One might even say that this composite reader resembles the camel of the story, he is a person made up of the self-projections of all those who talk about the reader.

Principally, however, the reader is marked by a curious combination of detachment and engagement. The detachment emerges from a sense that the text inhabits a shadow world brought into reality only by the reader's consciousness.⁶ The engagement emerges from an aesthetic surrender to the text in all its subtlety and complexity. How the reader connects the text to other texts appears to be a point of controversy. To some, texts comprise a system which we call literature and which has its reality; to others each text exists in isolation, and any connection with other texts is made by the reader. The controversy may seem a distinction without a difference, but it does raise the issue of whether the reader is a solipsism, which issue bears directly on the instruction.

"Instruction" brings us around to the question of how a reader becomes a reader. Does the reader "jes grow"? Does the reader spring Athena-like from the brow of Stanley Fish or Louise Rosenblatt? Or are there some forces that might help an ordinary mortal become a reader? At this point the critics are

of little use. Rosenblatt suggests that some readers are more complete than others in accounting for their transaction, but she balks at suggesting a training program. Most of the others avoid the questions. Psychologists and educational researchers have made some suggestions, however, and it is to them we might turn.

Recent psychological research has focussed on the concept of schemata, which is to say a kind of mental outline one has when one perceives something. It is close to an expectation or a prediction that the phenomenon is to be understood in a particular way. Recent research in reading comprehension suggests that when we read we project a schema upon the text. Even a young child begins a sentence or story with the expectation that it will have certain features. Reading, then, appears to follow a pattern of prediction followed by confirmation; it is not a purely inductive process. "...text understanding proceeds by progressive refinement from an initial model to more and more refined models of the text.... The initial model is a partial model, constructed from schemas (sic) triggered by the beginning elements of the text."⁷ So say a group of cognitive psychologists, and their work appears to be confirmed by developmental psychologists and others.⁸ In a particularly cogent essay on metaphor, Andrew Ortony, shows how schemata enable one to define metaphor more sharply.⁹ In fact, some have even argued against a reader's over-reliance on the text and distrust of the schemata that the reader possesses,¹⁰ a clear support of the role of the reader. It is suggested that readers acquire schemata in a variety of ways - from apprehension of the phenomenal world, from hearing various kinds of discourse, from prior reading, to name but the most obvious. Different readers acquire different schemata, which is why one student can interpret Emily Dickinson's

I never lost as much before

And that was in the sod,

as having to do with golf, another as having to do with horse races; and a third with having to do with death and burial (I am not inventing the first two readings, they appeared in Advanced Placement papers in the 1960's).

Schemata are then perceptual bases for reading texts; they constitute the "clouds of glory" each reader trails in entering the act of reading not unlike Holland's "identity theme," but perhaps more encompassing. It would appear that they are also modes of perceiving discourse, which is to say, choices as to what to attend to as one reads. In a recent informal study, I asked a group of undergraduates to tell me what the theme of a story was and how they came to the theme. About half related the theme to one set of characters, the parents; another half to the child. This, one might say was an instance of schema theory at work.

As interesting, perhaps were the reports of how they derived theme - or meaning: from a specific phrase or sentence, from a repeated word, phrase, or event, from a perceived parallelism of objects or events, from a perceived contrast of objects and events; from comparison to another work or to a genre; from concentration on and analysis of one character; and from a perceived pattern of words, objects, or events. There may be others than these they report, and they did not report why they chose the method they did; perhaps they did not know. Their reports, nonetheless, suggest that these methods of reading have the characteristics of schemata: acquired, dependent on the reader, determined by the reader.

When it comes to critical strategy, which is to say the mode in which a reader discusses a text (whether, for example, to concentrate on structure, language, or meaning and symbol), my earlier research suggests that readers possess a strategy much as they possess schemata.¹¹ In many readers a strategy of discourse or of response tends to persist across selections read and to be culturally bound. In the United States, for example, the pattern consists of

concern for symbol, theme, and moral, and is held by those students who perform well on comprehension tests.

Schemata, then, whether they relate to the perception of content, to the procedure for determining meaning, or to the style of talking about a text, schemata are acquired or learned, and they appear to constitute the major form of variation among readers. Curiously, however, readers are most homogeneous in their emotional reactions to a text, as Gunnar Hansson has shown, when he reported that trained and untrained readers from a variety of walks of life respond to a poem in almost exactly the same fashion.¹² Their similarity may be a cultural phenomenon, but his finding is one of the few solid pieces of support for a textual counter-revolution. It is supported in a different way by the work of Arthur Applebee, who used a "repertory grid" or series of scales by which students could rate texts and who found increasing consensus as the students grew older. There are other instances of research showing that groups of people share meaning and are thus not completely free of the text.¹³ Nonetheless, it appears clear that readers acquire schemata in part by simply existing as perceptive beings, in part by being taught. It would appear that an educational system can modify the array of schemata presented to readers and thus produce certain kinds of readers. Such was certainly the case of the French educational system of explication du texte, of the schools that used Understanding Poetry or other texts, or of schools that drilled students for particular kinds of examinations. Schools and literature courses necessarily affect the schemata acquired by the reader, but the extent and direction of the effect can vary, a point to which I shall return.

A second major issue concerns the reader's acquisition or development of an appropriate stance towards the text. Many critics have advocated aesthetic distance; others have vaunted something called engagement or introjection or

absorption. Which of the two is to be preferred and how can one help people develop the preferred stance? The first part of the question may be more easily assessed than the second, I think. Arthur Applebee, in his excellent discussion of children's concepts of stories, uses terms borrowed from British psychologists, participant and spectator, to describe the two states and shows that children appear to move from a participant role to that of a spectator as they mature.¹⁴

I would argue that aesthetic distance and engagement are two sides of the same coin. Aesthetic distance may be said to involve several components: the realization that the text is to be read aesthetically in Rosenblatt's sense of the term, rather than as an information-bearing document; the consequent realization that the form and language of the text are of importance; and the realization that the text exists in an aesthetic context.¹⁵ Distancing implies that the reader makes a conscious choice as to how to read the text. One question that is not raised, for example, is "Should I do what the text tells me to do?" At the same time the reader assumes that the text is a text, that is to say a fiction. Nonetheless, this set of assumptions does not mean that the reader remains aloof while reading the text. One may become absorbed, laugh, cry, and have all sorts of reactions. Many readers become absorbed in reading to the extent that they are annoyed at an interruption. They are simultaneously spectators and participants and neither absolute state is to be preferred. Research has shown that when readers enter into "aesthetic reading" they undergo changes in heart beat and galvanic skin response.¹⁶ What mental effects are less easy to define, although some have suggested such effects as identification, imaging, and introjection. Cary Nelson has suggested that Derrida's redefinition of incorporation is the best term "The object is internalized but unintegrated. It is included within the self but alien to it, inaccessible...."¹⁷ With certain texts and under

certain conditions, readers then make a conscious effort to disengage themselves from this kind of absorption. It is at this point that they become "critics," looking at the text and their experience of it in a detached vein.

The last action would appear to be the one in which the structuralists are most interested: the conscious cognitive act of examining one's experience of the text. The reader seeks to make explicit much of what has been an internalized act and must look closely at his or her own perceptions and schemata as at the language, form, and content of the text. Which of these varied aspects of what has gone on before will be the object of examination depends in part on the purposes of the examination and the audience of the report. Some choose to choose to look only at the language and at linguistic structures; some choose to look at the text in the light of its history; some choose to look at its emotional impact or its moral. This choice is again the result of instruction and circumstance. The reader becomes a participant in another transaction -- with his or her audience.

The reader, then, would appear to make a conscious decision to read a text in a particular fashion, follow that choice through in the actual reading, and then undertake a series of conscious or semiconscious decisions about what aspects of that reading to contemplate -- or whether to contemplate them at all. In many cases such as when reading detective stories, readers may choose not to contemplate, but simply accept the experience and go on to something else. Interestingly enough, high-school seniors who report an habitual tendency towards introjection also tend to be more inclined to consider questions about their self-involvement with the text than to consider questions about the meaning of structure of the text.¹⁸ These people are not necessarily better or poorer readers, or more or less interested in literature, but they do appear to be consistent in taking a personal and experiential approach to what they

read and to their reports of the transaction. One might call them narcissistic readers; whether they will turn into critics or Stanley Fish's reader I cannot say.

The role of instruction in fostering a wedding of aesthetic distance and incorporation remains to be examined. We have no evidence of instruction's effect one way or another, but we have a plethora of opinion. Instruction would appear to affect what aspects of the transaction a reader will talk or write about, as I have noted earlier, but there is no clear evidence that teachers can promote or hinder an aesthetic reading or a deeper involvement with what is read. I suspect I can point to ways by which teachers and textbooks can prevent or minimize involvement, ways such as conditioning its non-appearance by asking inane questions or treating every text as if it were to be read for an examination. We know that when given reading tests with passages followed by multiple-choice questions, adept students know not to waste time reading the passage and certainly not to let it sink in. Many reading programs in the schools use nothing but a testing approach and appear to produce a number of anesthetized non-readers.

I have argued elsewhere that a pedagogical approach which begins with the reader's immediate response to a text can produce this dual stance of aesthetic distance and involvement, but I have no proof that my claim is valid. It would appear reasonable that increased aesthetic reading and involvement might occur, but whether it can lead to criticism and deconstruction remains unknown.

In summary, then, the newly enthroned reader stands as a person who has a complex set of schemata to bring to bear on a text, who can willingly enter into seeing the text as an aesthetic object; who becomes involved with reading, and who emerges from reading with a willingness to enter into a complex analysis of the transaction with the text. Where does formal schooling fit into this

picture?

In some respects schooling plays little or no part. Thanks in part to television, children come to school with some schemata and they come with the capacity to be involved in what they read. Whether from school or not, they appear to acquire a sense of the fictionality of texts and of themselves as spectators or aesthetic readers.¹⁹ On the other hand, schooling can play an important role in the providing of schemata; studying anything and learning everything can help produce a Fish, a Holland, or a Derrida. Again, one cannot be prescriptive save to say that all readers should earn Ph.D.'s in many subjects or become another Robert Pirsig in Zen and the Art of Motorcycle Maintenance, a student of all knowledge.

But these recipes do not help those of us who have to deal with general education, which may be interpreted as a broad education for the individual who will later specialize or as education for the general populace. We have a few hours or at most a few months of one individual's life in which to help make that individual a reader. What can we do to affect a reader's schemata or to help the reader take the appropriate stance? The easiest answer, to do nothing, seems inappropriate. Another answer, often implied by many, is to revert to the pedagogy of the New Criticism with tongue in cheek. After all, the best structuralists were taught that way, and their reaction to their training brought them to their point of eminence. There does seem to be some method in this madness, for certain aspects of "New Critical" training indeed have merit--the advocacy of close reading and of scrupulous attention to the words of a text and their interrelationships. Ortony's essay on metaphor, for example resembles a close reading and a mulling of what interactions among words and schemata occur when one says that "encyclopedias are like gold mines" is a metaphor and "encyclopedias are like dictionaries" is not.

Yet close reading is not all, I think, for the reason that it negates the principle of schemata and negates the individuality of the reader's response. It seems that there are probably three functions of a curriculum in literature, and I find I must think of a total curriculum rather than a one-year course. The first function is to provide schemata, particularly literary schemata. The choices among schemata are many, but certainly, if one were to follow the idea of Northrop Frye or the Jungians, folk literature and myth would have a strong place in the curriculum. Such was certainly the premise of the Nebraska curriculum of the 1960's, one of the more carefully conceived curricula in literature. One might also consider the genres and sub-genres, and in particular the "classic" examples of those genres.

As I have suggested earlier, however, schemata in literature are not merely derived from experience with literary types and forms. A second kind of schemata lies in the characteristic approach to a literary text--and perhaps any text held by a reader. This approach can be broadened or narrowed through instruction, and it would appear that the development of our ideal reader would include exposing that reader to a variety of approaches. In many ways, these approaches manifest themselves in the questions a reader asks in response to a text. If the only question asked and rewarded is "What does it mean deep down underneath?" that question will dominate the critical approach of a reader. Other cultures and other periods within our own dominant culture have suggested alternatives to that question, and it would seem therefore that students should be exposed to a variety of critical schemata, including those which are personal and affective, those which are analytic, those which are interpretive, and those which are evaluative.

The second function of the curriculum, besides that of exposure, attempts to deal with the relationship between incorporation and distance, by acknowledging

it frankly. The curriculum and the teacher must realize that there may indeed be many idiosyncratic responses to a text, many individual transactions, and they may appear so disparate as to be unwieldy from a pedagogical point of view. Yet it has been my experience that these can be dealt with in a number of ways, all of which fall under the general rubric of the "response-centered" curriculum, that curriculum which acknowledges the transaction and makes it the object of serious and rigorous discussion and analysis. In employing such an approach, a teacher must hold as possible any statement about a text and explore with the students the ramification of all statements that are made. Some of these statements may be rejected, but all of them are potentially valid. That approach parallels the approach of a literary critic like Northrop Frye admitting all comers to the canon of literature--at least initially. In addition to being flexible, however, the teacher must be probing and force the students to examine the assumptions underlying their statements. In so doing, the teacher does not deny the validity of any aesthetic transaction, but makes all transactions the object of serious contemplation.

The third function of the curriculum in creating a reader is that of providing students with a set of heuristics or strategies for being a reader. It is here, I would suggest that we know the least about what to do, and it is here that we would appear to be acting against the assumption underlying the first two functions. If we reconsider the students' attempt to find the theme of a story, we will note that many of them followed certain procedures haphazardly, or they appeared to. In some cases the procedure they followed bore fruit; in other cases it did not; for the text was so structured that to concentrate on one character was less productive than to look at parallels. If those students had a set of heuristics by which they could reject certain approaches to theme and accept others, they

could indeed engage in more sophisticated discourse about the selection. I use the term heuristic, rather than rule, for a rule is arbitrary and allows no deviation, whereas a heuristic follows from a principle and allows for variation when people apply it. Heuristics are, I think, related to schemata, but in ways which have not been fully explored.

There are, for instance, heuristics by which we sort experience -- whether it be virtual or vicarious -- heuristics related to our ideas of space, of time, of cause and effect, of similarity and difference. There are heuristics by which we attend to certain aspects of language so as to make sense of it, by which we look for patterns in discourse, and by which we infer the nature of the speaker or writer of such discourse. Currently much of what is learned in English, such as writing an organized paper, developing cogent argument, interpreting a literary text, finding a symbol, is learned through trial and error or through modelling. Students, for instance, are asked for the theme of a story and, failing to come up with one, are asked a series of questions leading to a theme. As the experience is repeated, eventually, some students are successful, but not many, and none are explicitly taught any principles or procedures for independently deriving a theme. Many students become disenchanted with literature, just as many become disenchanted with writing after not learning the heuristics for writing a passable essay. Those parts of English that have clear rules may be the only ones learned -- punctuation, for example. Would they become less disenchanted if they learned heuristics?

Can we be more specific about these heuristics? I think we can, but to do so may involve too detailed an analysis at this point. Rather than be definitive, I should like to be illustrative, turn in more detail to the matter of theme or main idea, and take as an example a difficult text, The Heart of Darkness.

How does one go about finding the theme of that novella? It would seem that there are a number of possible procedures. One is to assume the veracity of Marlowe and look at all of his generalizations. A second is to assume the importance of the title and examine the uses of heart and darkness. A third is to look for juxtapositions and stated or implied comparisons. A fourth is to look for repetitions of work or event. A fifth is to look at the motif of the story and look for analogues in other journeys. A sixth is to look at the structure of the story -- the frame tale -- and seek to determine the relationship of frame to tale. A seventh is to explore a particular character, in this case Kurtz, and see if he embodies a theme. To me each of these heuristics can lead to a statement of theme, and each procedure will call into play parts of some of the others.

Although the working through of any one of these heuristics can be quite complex, the point is that each is generalizable and can be practiced on another text, a relatively straightforward one like Death of a Salesman or a highly complex one like Ulysses. We can make these heuristics quite explicit to students. No one of them is necessarily any better than any other as a general strategy, but some of them work better with some texts than they do with others. Further, they are not to be confused with technical terms like symbol or topoi, which may be used in the employment of a heuristic but are not the heuristic itself. Some of these terms are useful, but they should not be confused with their use in following a heuristic.

There are, I believe, heuristics for doing many of the other things that readers do, such as comparing texts, evaluating texts, explaining metaphors, or analyzing a character. These, too, can be learned as generalizable ways of going about the act of reading. Together with the acquisition of schemata and the exploration of response, they provide us with the basis for a curriculum

that might prepare many more of our students to assume the royal mantle of a reader.

Urbana, Illinois
November 1979

1. Stanley E. Fish. "Interpreting the Variorum," Critical Inquiry, (Spring, 1976), 468.
2. Norman Holland. 5 Readers Reading, New Haven, Yale University Press, 1975.
3. Cf. Edward Said. Beginnings: Intention and Method (New York; Basic Books, 1975); Umberto Eco, A Theory of Semiotics (Bloomington: Indiana Univ. Press, 1976); Thomas E. Lewis, "Notes Toward a Theory of the Referent," PMLA, 94 (May, 1979), 459-475; Cary Nelson, "Reading Criticism," PMLA, 91 (Oct. 1976), 801-815.
4. Louise M. Rosenblatt. The Reader, The Text, The Poem, (Carbondale, Southern Illinois Univ. Press, 1978).
5. Fist, Op. Cit., p. 479.
6. It is here, I think, that Rosenblatt parts company from others, for she is unwilling to grant that point fully.
7. Allan Collins, John Seely Brown, and Kathy M. Larkin. "Inference in Text Understanding," unpublished manuscript. Bolt, Baranek, and Newman, n. d. p. 4. Schema theory dates back to the 1930's and is related to both gestalt psychology and the psychology of personal constructs of George Kelly. Schemata also resemble the semiologists "code."
R. P. Abelson ("Structure of Belief Systems," R. C. Schank and K. M. Colby Computer Models of Thought and Language, San Francisco, Freeman, 1973; 287-340) suggests six levels of schemata-elements, atoms, molecules, plans, themes, and scripts-each defined in terms of the lower ones. Whether these levels may also be seen developmentally remains to be determined, but they do appear to have linguistic analogues.
8. Shelley Rubin and Howard Gardner. "Once Upon a Time: The Development of Sensitivity to Story Structure," unpublished manuscript presented at the Buffalo Conference on Researching Response to Literature, Oct. 1977 also Sharon Silkey and Alan C. Purves, "What Happens When We Read a Poem," Journal of Aesthetic Education.
9. Andrew Ortony. "Beyond Literal Similarity," Psychological Review, 86 (May, 1979), p. 178.
10. Rand J. Spiro. "Etiology of Reading Comprehension Style," Technical Report No. 124 (Urbana, IL. Center for the Study of Reading, 1979).
11. Alan C. Purves. Literature Education in Ten Countries, (Stockholm, Almqvist and Wiksell, 1973).
12. Gunnar Hansson. Dikt i Profil (Göteborg, Akademiforlaget-Gumperts, 1964).
13. Arthur N. Applebee. "Children's Construal of Stories and Related Genres as Measured with Repertory Grid Techniques," Research in the Teaching of English, 10 (1976), 226-238.

Another source of support would be the finding that texts do influence the responses of readers to the extent that one can predict the kinds of questions asked by the text selected. Alan C. Purves, Achievement in Reading and Literature in the United States (unpublished ms. 1979).

14. Arthur N. Applebee. The Child's Concept of Story (Chicago, University of Chicago Press, 1978).
15. Cf. inter alia, Northrop Frye, Anatomy of Criticism (Princeton Univ. Press, 1960.).
16. A. C. Purves and R. Beach. Literature and the Reader (Urbana, NCTE, 1973); M. Angelotti, R. Behnke, L. Carlile, "Heart Rate: A Measure of Reading Involvement," Research in the Teaching of English, 9 (1975) 192-199.
17. Cary Nelson. "The Psychology of Criticism, or What Can Be Said," Psychoanalysis and the Question of the Text (Balitmore, Johns Hopkins, 1978), p. 57.
18. A. C. Purves, 1979.
19. A. N. Applebee, 1978.